# CHAPTER 1. PURPOSE AND NEED FOR ACTION

## Document Structure

The Forest Service has prepared this Environmental Impact Statement in compliance with the National Environmental Policy Act (NEPA) and other relevant Federal and State laws and regulations. This Environmental Impact Statement discloses the direct, indirect, and cumulative environmental impacts that would result from the proposed action and alternatives. The document is organized split into Volume 1 and Volume 2. Volume 1 is organized into four chapters plus the references, glossary and a map section. Volume 2 contains all the appendices including the Forest Service response to comments on the DEIS.

*Chapter 1. Purpose and Need for Action:* The chapter includes information on the history of the project proposal, the purpose of and need for the project, and the agency's proposal for achieving that purpose and need. This section also details how the Forest Service informed the public of the proposal and how the public responded.
*Chapter 2. Alternatives, including the Proposed Action:* This chapter provides a more detailed description of the agency's proposed action as well as alternative methods for achieving the stated purpose. These alternatives were developed based on significant issues raised by the public and other agencies. This discussion also includes mitigation measures. Finally, this section provides a summary table of the environmental consequences associated with each alternative.
*Chapter 3. Existing Condition and Environmental Consequences*: This chapter describes the environmental effects of implementing the proposed action and other alternatives. This analysis is organized by [insert topic (i.e., resource area, significant issues, environmental component)].
*Chapter 4. Consultation and Coordination:* This chapter provides a list of preparers and agencies consulted during the development of the environmental impact statement.
*Appendices:* The appendices provide more detailed information to support the analyses presented in the environmental impact statement.
*Index:* The index provides page numbers by document topic.
Additional documentation, including more detailed analyses of project-area resources, may be found in the project planning record located at the Prairie City Ranger District.

## Changes from the Draft to Final EIS for this Chapter

The following changes were made between the Draft and Final EIS. This listing does not include corrections, explanations, or edits to grammar and spelling. Some of changes resulted from comments made to the DEIS.

- Updated existing condition in the roads and noxious weeds section. The road densities (open & closed roads) were updated based on field information and noxious weed information was updated based on field surveys in the summer and fall of 2003.

- The proposed action was modified to reflect updated field information and incorporate reclassification of stand types used to determine snag levels. This change resulted in a 52% reduction of the number of acres proposed for salvage harvest. This reduction was due to decreased tree mortality (14%), deterioration of the dead trees (5%), and retention of snags in mixed conifer stands (33%). Timber harvest would be uneconomical in those stands where mortality levels are low and in areas where deterioration of the dead trees over the last two years was severe. A number of forested stands were reclassified as lodgepole pine due to effect of severe fire on mixed conifer stands. The remaining mixed conifer stands were dropped from planned harvest because their snag distribution does not meet DecAIDs recommendation, even in the existing condition. These mixed conifer stands were retained as snag habitat. A unit by unit summary of the changes can be found in the Project File (Changes DEIS to FEIS, 08/12/2004).

## Purpose of and Need for Action

The underlying purpose and need for this action is to recover the resources burned and adversely affected by the 2002 Easy Fire. Actions are needed to restore forest vegetation, restore wildlife and aquatic habitat, and to reduce the severity of future wildfire in the Easy Fire area. There is also a need to recover merchantable value in the fire-killed and dying trees before it deteriorates.

In order to meet the underlying need, actions proposed in the Easy Fire Recovery Project shall be guided by the following objectives:

- Capture the economic value of the dead and dying trees that are excess to other resource needs;
- Re-vegetate the project area to appropriate forest structural conditions and tree species to improve wildlife and fish habitat, reduce the spread of Armillaria root disease, and ensure a future supply of timber products from the area;
- Re-establish Dedicated and Replacement Old-Growth areas (DOGs and ROGs) that burned and are no longer suitable to meet this Forest Plan requirement;
- Reduce dead standing and down fuel, and work toward the stand structure and fuel models consistent with the fire regime for the area.
- Reduce road-related impacts in the fire area to meet Forest Plan standards for wildlife.

The need for the proposed action is derived from the differences between current conditions and desired conditions. Desired conditions are based on Forest Plan direction and management objectives. The proposed action is designed to move resource conditions closer to the desired conditions, and address the management direction provided by the Malheur Land and Resource Management Plan (1990), as amended.

The two broad categories expressed above in the underlying purpose and need are: 1) the acceleration of ecosystem restoration, and 2) timely commodity extraction. Each of the existing and desired conditions relevant to providing improved conditions and accomplishing commodity extraction for jobs and income can be linked to the purpose for the proposed action.

The proposed action is developed early in the planning process to address differences between existing and desired conditions. For example, the purpose of reducing severity in future fires is linked to the need to alter fuel conditions that will allow for future management actions that move the landscape toward historical conditions.

The proposed action utilizes the opportunity to salvage harvest the fire-killed trees. Salvage from this unit is also directly linked to reducing future wildfire severity by reducing coarse woody fuels and the desire to provide jobs and income.

## Project Objectives:

### Capture Economic Value of Dead and Dying Trees

Timber plays an important role in the economic stability of the local area by providing employment and revenues. There is a need to make wood products available for local, regional, and national needs in the most cost-effective manner, while being sensitive to resource conditions such as loss of ground vegetation during the fire, soil sensitivity to erosion, and steepness of slopes. Removal of timber in a timely manner is needed to capture value and quality prior to deterioration.

### Re-vegetate the Project Area to Appropriate Forest Structural Conditions and Tree Species

Approximately 3,002 acres (51% of the fire area) burned with high severity to vegetation in the Easy Fire Project Area (see Chapter 3, Forest Vegetation/Structure section, under Analysis Method, for definition of fire severity to vegetation). Very few trees are expected to survive the fire in these severely burned areas. This large landscape could take decades to regenerate under natural conditions, since live trees are lacking as a seed source. Re-vegetation through planting is needed to re-establish trees to these burned areas sooner. Prompt regeneration would also restore cover in big-game summer-range habitat sooner.

In addition, two large Armillaria root disease centers are located in the Easy Fire Project area. One of these centers is the largest known individual root disease center in the world. There is a need to plant tree species that have natural resistance to Armillaria root disease in these areas.

### Re-establish Dedicated and Replacement Old-Growth areas (ROGs and DOGs)

Portions of two Dedicated Old Growth areas (DOG) and one Replacement Old Growth area (ROG), as established in the amended Malheur Forest Plan, are within the Easy Fire perimeter. Initial reconnaissance and review of the fire area by interdisciplinary team members identified the need to replace DOG 364PP and the associated ROG, because of severe fire damage. The fire burned through the DOGs and ROG with moderate to high severity and no longer functions as habitat for pileated woodpeckers or pine martins. With the exception of small island patches that remain the canopy has been significantly reduced to below the level suitable for pine martins and pileated woodpeckers. Pileated woodpeckers minimally utilize burned areas unless they are adjacent to unburned stands with large trees. DOG and ROG boundaries need to be adjusted to comply with the requirement of the Malheur Forest Plan. A nonsignificant Forest Plan amendment will be needed to re-designate the ROG and DOG within the fire area from MA-13 to MA-1 and the new ROG and DOG will be changed from MA-1 to MA-13.

### Reduce Dead Standing and Down Fuel

There is also a need to treat fuels in an economically efficient manner. Removal of fuels through salvage of fire-killed trees is the most cost-effective fuels treatment available for the Easy Fire at this time. Using salvage as a fuel treatment could cause some negative short- and long-term effects, but these effects must be weighed against the effects of future disturbance agents and foreseeable management activities that promote recovery of this ecosystem within the project area.

### Reduce road-related impacts

There is a need to reduce road densities in the project area where deer and elk security habitat has been affected by the fire and to meet Forest Plan standards.

# Background

On July 12, 2002, a series of large thunderstorms passed through the Blue Mountains of Eastern Oregon and ignited numerous fires on the Malheur National Forest, including the Easy Fire. Several days of high daytime temperatures with strong northerly winds increased fire activity and expanded the fire area to 5,839 acres before it was contained. The fire was completely within the Prairie City Ranger District, Malheur National Forest, located approximately 11 miles east of Prairie City, Oregon. The legal location of the fire includes all or portions of T12S, R35E, Sections 14, 15, 20-23, 26-29, 31-35 and T13S, R35E, Sections 3-5, Willamette Meridian, Grant County, Oregon (Figures 1 and 2, Map Section).

Approximately 81% of the fire is contained within the Upper Middle Fork John Day River watershed and 19% within the Upper John Day River watershed. The three major drainages within the project area are Clear Creek, Easy Creek, and Mossy Gulch.

The following is a brief description of existing conditions in the Easy Fire area. An expanded discussion can be found by resource area in Chapter 3 – Existing Condition and Environmental Consequences.

## Fire Suppression Activities, Completed Fire Rehabilitation, and Ongoing Fire Recovery Project

**Table 1-2: Fire Suppression Lines for the Easy Fire**

| Subwatershed | Interior and exterior fire line (total miles) | Constructed dozer line (total miles) | Dozer Fireline within RHCA (feet) | | |
|---|---|---|---|---|---|
| | | | Fish bearing | Perennial | Intermittent |
| Clear Creek | 13.4 | 9.9 | 477 | 0 | 447 |
| Bridge Creek | 3.2 | 2.2 | 0 | 0 | 157 |
| Reynolds Creek | 6.0 | 3.1 | 0 | 0 | 346 |

About 22.6 miles of fire line was utilized to contain and control the Easy Fire (this includes fire lines both inside and outside the boundary of the project area). Fire lines consisted of open and closed roads, dozer line, and hand line. Approximately 15.2 miles of fire line was built with dozers (See Figure 7, Map Section, and Table 1-1). A portion of the dozer lines were constructed within RHCAs in the Clear Creek subwatershed. One dozer line crossed a Category 4 stream in the Bridge Creek subwatershed.

A number of roads closed with gates or earthen berms were opened during suppression activities. The roads were used as firelines or to improve access for suppression.

Twelve safety zones were identified along the boundary or outside the project area.

Rehabilitation of fire lines occurred on roads opened to create a fire line, on dozer lines built cross-country, and on constructed safety zones. On previously closed roads that were opened to create a fire line, rehabilitation included keeping the roadbed intact, reinstallation of gate closure devices, and installation of water bars as needed. Other road closure devices such as ditch, woody debris, or other closures have not been reinstalled. Rehabilitation on dozer lines consisted of knocking down the berm created by the dozer, creating cross ditches (similar to waterbars), and scattering slash, logs, large rocks and other debris on the fire lines to both reduce potential for sediment movement and to blend the fire lines with the landscape. Rehabilitation occurred in late summer and fall of 2002.

Fire retardant was used on a limited basis during initial attack and sporadically as the need arose during containment (6 drops). There is no readily observable existing retardant residue in streams, ephemeral draws, or Riparian Habitat Conservation Areas (RHCAs), and no lasting consequences that can currently be observed from retardant applications. The fire camp was located on private property initially at the high school in Prairie City and later at Summit Prairie, which is outside the project area.

The Burned Area Emergency Rehabilitation (BAER) team evaluated the fire for resource condition and the need to take action to prevent or reduce additional resource damage caused by the fire and not by suppression (USDA Forest Service, 2002; BAER Report). The BAER team made the determination that no emergency rehabilitation of land, stream channels, or side slopes was needed because there were few areas of water repellency observed, slopes were generally gentle, and no severe erosion was expected from the soils found in the area. Ground cover seeding was not recommended since it was felt that natural revegetation would be adequate. Monitoring of noxious or invasive weeds was recommended to see if they are expanding their distribution or invading from outside sources.

## Severity of Burn

Severity of burn was analyzed using two methods: 1) BAER burn severity, and 2) vegetation severity. BAER burn severity describes damage to the soils and ground vegetation. Vegetation severity describes to damage to forest vegetation. This is the reason that acres burned by severity category are not the same for both methods. Furthermore, total acres burned do not match between the two methods because the fire perimeter used in the mapping was not the same for each method. The fire perimeter for the BAER burn severity map (Figure 5, Map Section) was drawn from remote sensing (satellite imagery) and is not as accurate as the vegetation severity map (Figure 6, Map Section), which was based on observations on the ground. The “official” total acreage for the project area (5, 839 acres) was derived from the vegetation severity map.

# Existing Condition

## Forest Vegetation/Structure

Within the 5,839 acres in the Easy Fire project area, about 3,002 acres burned with high severity to forest vegetation, using vegetation severity mapping (see "Severity of Burn, above) around 1,870 acres burned with moderate severity, approximately 749 acres burned with low severity, and about 61 acres burned partially (in a mosaic pattern). About 157 acres of forest within the Easy Fire area were unburned (Figure 6, Map Section).

The majority of surviving trees are western larch or ponderosa pine. Few lodgepole pine, Douglas-fir, grand fir, subalpine fire, or Engelmann spruce are expected to survive the fire and post-fire insect attacks. The seed source for natural reforestation is limited in about one-fourth of the fire area because of the high mortality and distance to the nearest seed source. The remaining three-fourths of the fire vicinity has live trees or is within 800' of live trees and is in the seed dispersal zone.

In areas that burned with high severity (stand replacement), fire converted all previous structural stages to stand initiation (very few or no surviving trees), while areas of moderate and low severity fire converted many stands to understory reinitiation (a partial overstory with no understory). Low severity fire burned through several stem exclusion single-strata stands killing only scattered trees and leaving a thinned stand that is still stem exclusion single-strata. As a result of the fire, there is little or no young forest multi-strata, old forest single-strata, and old forest multi-strata remaining within the fire locale.

## Wildlife Habitat

The Malheur Forest Plan, as amended, identifies 15 Management Indicator Species (MIS) and their associated habitat requirements. MIS habitat requirements are presumed to represent those of a larger group of wildlife species, and act as a barometer for the health of their various habitats. Pine marten, pileated woodpecker, and northern three-toed woodpecker represent old growth habitats, Rocky Mountain elk represent big game habitats, and primary cavity excavators (most woodpeckers) represent dead wood habitats. Post-fire habitats are very different from pre-fire habitats.

There is essentially no old growth habitat remaining within the fire perimeter. Small patches of old growth habitat remain; these patches are not large enough to support a pileated woodpecker home range but could provide foraging opportunities. Dedicated Old Growth (DOG) 364 and Replacement Old Growth (ROG) 364 were burned; creating gaps in the Forest's old growth network (see Figure 9, Map Section). The DOG and ROG no longer function as old growth. Forest canopy cover has been reduced or eliminated, reducing nesting habitat for such species as the pileated woodpecker and northern goshawk, and eliminating denning and foraging habitat for such species as the pine marten.

The fire impacted elk and deer habitat. Very little thermal or hiding cover remains. Forage has been temporarily eliminated, particularly in severely burned areas. The losses of cover and forage, in combination with the high road densities, have changed deer and elk use patterns. As forage recovers, big game will likely forage in the burn area, primarily during

the night, and retreat to security cover in adjacent unburned areas during the day. During the hunting season, elevated human use will likely preclude big game use in the burn area.

Conversely, fire can temporarily increase some wildlife habitats. Snag levels are now greatly elevated, increasing habitat for many woodpecker species. Black-backed woodpeckers, in particular respond positively to post-fire habitats. However, the availability of this snag habitat is time-limited. Most snags are likely to fall in the next 10 to 30 years, reducing snag habitats and creating abundant down log habitats.

Prior to the fire, forested communities in the Easy Fire project area provided limited habitat for threatened, endangered and sensitive species. This may be due to the extent of past management activities, particularly timber harvest and road construction. Forested areas may have provided travel or dispersal habitat for large, wide-ranging carnivores such as wolverine, lynx, fisher, and wolf; however, post-fire loss of cover has reduced the quality of travel habitat even further.

## Fisheries and Watershed

The Easy Fire burned (using BAER burn severity mapping, Figure 5, Map Section) within two watersheds: the Upper Middle Fork John Day River and the Upper John Day River watersheds ($5^{th}$ field Hydrologic Unit Code - HUC). Both watersheds contain fish-bearing streams (Category 1) and perennial, non-fish bearing streams (Category 2), as well as intermittent stream channels (Category 4).

In the four subdrainages that contain the fire area, the following streams are listed on the Oregon DEQ's 303(d) list (year 2002) as having limitations in summer stream temperatures: Clear Creek, Dry Fork Clear Creek, Lunch Creek and Reynolds Creek (see Figure 26, Map Section). The 303(d) list indicates that these streams exceed specific temperature criteria in a seven-day average of daily maximum temperatures in the summer season. The beneficial uses affected are bull trout habitat and salmonid rearing habitat.

Clear Creek shows the greatest increase in created openings resulting from the fire. Before the fire, 13 percent of Clear Creek's area consisted of created openings. After the fire, about 34 percent of the watershed is expected to act as hydrologic openings. Bridge Creek showed an increase of 4 percent, from 12 to 16 percent, and Reynolds Creek showed an increase of 3 percent, from 7 percent to 10 percent. The other subdrainages were not affected by the fire, and on a watershed level, the percent of current, post-fire created openings is low (11% for UMFJD, and 6% for UJD).

The stream/riparian habitat along Clear Creek was little affected by the fire and is characterized by large numbers of large woody debris, highly stable banks and good channel complexity and vegetative cover. Conifer mortality caused by the fire within the Clear Creek RHCA will provide large woody debris to the riparian area and stream in the future as well as increase vegetative diversity. Any expected small increases in peak water flow are not likely to adversely affect stream channel conditions. The other subdrainages are not likely to experience increased peak flow from the fire, based on the small percent of the subdrainage areas that were affected by the fire.

The BAER team concluded that overall, both runoff and sedimentation are expected to increase within those subwatersheds that were influenced by high intensity fire, such as the Clear Creek subwatershed. This is likely to continue until ground cover can be established. Initial recovery of vegetation would result from re-growth of grasses, forbs, shrubs, mosses,

liverworts and conifer seedlings. However, less than 5% of the area of these fires had experienced significantly reduced infiltration, which should minimize the amount of increased runoff (also expected to be about 5-10%) (Bright et. al, 2002).

Current aquatic habitat conditions in the watersheds reflect almost 140 years of human activities. Where past impacts to riparian and aquatic habitat exist in the two watersheds, four dominant factors have resulted in the degraded conditions: 1) An extensive road system that imposes on most of the riparian areas within the watershed; 2) Past logging practices, which have both directly and indirectly influenced channel morphology; 3) Livestock, which have impacted stream bank stability and changed vegetative species composition; and 4) The significant reduction of beaver populations within the watershed. Water withdrawals and projects that artificially restrict stream channels have also impacted stream channels.

The Upper Middle Fork John Day River (UMFJDR) watershed and the Upper John Day River (UJDR) watershed both contain habitat for two federally listed (threatened) species under the Endangered Species Act (ESA) - Summer steelhead and bull trout, and two Region 6 sensitive species - the mid-Columbia River spring run chinook salmon and interior redband trout. An additional sensitive species, westslope cutthroat trout, is found in the UJDR watershed.

Clear Creek is the only stream in the UMFJDR watershed with documented Bull trout presence. However, it is assumed that use has occurred or will soon occur in Lunch Creek, with access provided two years ago around Bates mill on Bridge Creek. Clear Creek is currently the only fish bearing stream within the project area.

The BAER team determined there were no emergency needs related to the fire for or soil/watershed conditions. There were no recommendations such as grass seeding or contour log felling to treat emergency resource conditions within the fire perimeter.

## Soils

Most of the Easy Fire area has silt loam surface soils derived from volcanic ash over subsoils derived from volcanic rock, mostly basaltic andesite. The andesitic rock types are fine-grained, generally hard and competent, and moderately to highly fractured. These rock types are stable, with a strong resistance to mass movement (SRI, Malheur N.F. 1974). The northeast portion of the fire area contains areas with non-ash soils, which are loamy forested soils, developed from competent andesite, basalt, and interflow, tuff material.

In general, the ash-derived soils are less erosive and more productive than non-ash soils, since the ash soil layer is very porous with a high water infiltration rate, and can retain more water. Thus, there is less overland water flow to cause soil erosion. With a higher water holding capacity, the vegetation on ash soils re-establishes more quickly, thus minimizing the erosion potential. With the high soil porosity, ash soils are less susceptible to soil compaction than are non-ash soils.

However, with the low soil bulk density of the ash layer, the surface soils are more easily detached and disturbed from water erosion if ground cover is removed. Also, with no ground cover, these soils are more susceptible to soil displacement and mixing from management activities, especially when the surface soils are dry. If water is allowed to concentrate on these exposed soils on steep slopes, erosion can occur.

Slopes within the fire area are predominantly in the 0-30%, and 31-60% slope range. (Only a few areas are in the very steep slope range of 61-90%+.) Given these conditions and others

(e.g. factors concerning soil, bedrock and topographic features, no ground cover), the ash soils have an erosion potential of low to moderate (on 0-30% slopes), and high to very high (on slopes greater than 30%). The Forest Plan Standard of 20% detrimental impact is currently not exceeded in proposed activity areas. This is based on soil survey information collected in the filed during the fall of 2002, analysis of GIS information on roads, and aerial photo analysis of the project area.

With the non-ash, loamy forested soils, the erosion hazard on slopes over 30 percent is the dominant management concern. If the protective vegetative cover is removed, then rill and accelerated sheet erosion can occur on these steeper slopes. The loamy soils also have a moderate to high detrimental compaction hazard (SRI, Malheur N.F. 1974).

About 2,251 acres burned at moderate or high soil severity (using BAER severity mapping Figure 5, Map Section). The fire reduced ground cover below Forest Plan Standards in most of these areas. This reduction raises the risk of erosion and sedimentation to streams for one to five years.

## Fuel Models

Current Fuel Models (FM) determined by live vegetation and dead fuels on the surface, have been reduced significantly from pre-fire levels. FM 10 (heavy timber litter and down logs) and 11 (light stand) collapsed to a FM 8 (light timber litter) and FM 1 (short grass). Flame lengths and severity are expected to be low to moderate for the next 5 years because of lower surface fuel loads. Standing dead fuels (dead trees) in most units proposed for treatment are very high. For example, in unit 24 there are 421 standing dead trees per acre (total), with about 319 of those trees being smaller than 7 inches diameter at breast height (dbh). 179 trees are between 4 and 7 inches, about 48 are 7-12 inches dbh, and 55 trees per acre are larger than 12 inches dbh. The standing dead is starting to fall down and contribute to surface fuel bed depth. The fuel load will continue to increase over the next 5 to 10 years increasing the fuel model from FM 8, to FM 10, 11, and 12 (heavy stand collapsed). These conditions will remain until the next wildland fire, which can be reasonably expected to occur within 20 to 30 years from now. (See Figure 25, Map Section).

Approximately 25 percent of this future fuel loading will be in the small 0 to 3 inch material and 75 percent will be in material larger than 3 inches. This higher large fuel loading will lead to increased fire severity. In addition to the increased down woody surface fuel accumulations will be the increase of native grass and brush species that will increase flame lengths generated during the next wildland fire event. Fire severity outside the historical fuel models, can affect watershed health by reducing stream shade and by increasing erosion and sedimentation. High severity fire also alters wildlife habitat, providing increased levels of snag and down wood habitat for those species that prefer dead wood habitat. High severity fire also delays reestablishment of habitats such as those for old-growth dependent species, neotropical birds, and big game (hiding and thermal habitats).

Fire killed trees on thousands of acres of the burned landscape will lead to heavy fuel accumulations in years to come. Fuels need to be reduced in certain areas, based on management objectives and desired conditions, to decrease the risks future fires will pose to human health and safety, property and improvements, and resources. An important concept in the purpose and need is that concerns about future fire severity and extent in areas burned in

2002 are directed more toward fires in decades to come, rather than fires in the immediate future.

There is a limited window of opportunity in which to utilize salvage harvest as a tool to reduce fuels because the value of many fire-killed trees for forest products deteriorates relatively rapidly. This opportunity could reduce the fuel reduction costs to taxpayers and yield economic benefits.

## Economics/Social

The affected area or impact zone for the Malheur National Forest consists of Grant and Harney counties in Oregon. Agriculture, manufacturing (particularly wood products), and retail trade are important sources of employment and income in this region. Grant County, for example, has a low level of economic diversity, a high dependence on federal timber and forage, and a low resiliency for change. Reliance on timber and forage from federal lands is moderate to high in counties in the impact zone (Haynes et. al., 1997).

Many communities in the impact zone are closely tied to the Forest in both work activities and recreation. Several communities such as John Day, Canyon City, Mt Vernon, Prairie City, Burns, and Hines are geographically isolated from the closest larger cities such as Pendleton, Ontario, Bend, Baker City and La Grande (Reyna et al. 1998).

## Roads/Access

A roads analysis was completed consistent with current direction (Easy Fire Recovery Roads Analysis, USDA Forest Service 2003). Most roads are native surface that receive inadequate maintenance due to limited funding.

In the past, within the Easy Fire Recovery Project Area, stream systems have been impacted by road density, location, and inadequate maintenance. Some of these roads directly influenced channel morphology, limited woody debris recruitment, and contributed sediment to the stream channel. Currently, however, roads are generally in fair to good condition due to recent timber sale related reconstruction activities. There is only one short section (0.3 miles) of road that is in need of application of grid-rolled material to prevent rutting.

Roads near streams chronically transport sediment. The presence and use of these roads will continue to supply sediment to streams and impact water quality by channeling water and the break down of the road surface from vehicular traffic. Sediment from the roads will maintain degraded conditions of fish habitat. Of particular concern is Road 2635, which parallels portions of Clear Creek, Mossy Gulch Creek, North Fork Reynolds Creek, and Reynolds Creek. However, the Malheur National Forest level roads analysis rates that portion of Road 2635 along Clear Creek as only a low watershed risk due to the distance between the stream and road. The last 8 miles of Rd. 2535, which parallels Mossy Gulch, North Reynolds, and Reynolds Creeks, are rated as a moderate watershed risk.

Access management plans exist for all or portions of the three subwatersheds in which the project area lies. It is the intent of the Forest Service to continue to implement these access plans, which will reduce subwatershed road densities. The foreseeable road densities for the subwatersheds are based on information in Appendix B and are shown in the following text.

### Reynolds Creek Subwatershed Road Density

#### Existing Condition

Since the Mossy decision was signed some road closures have been implemented in the Reynolds Creek subwatershed. The open road density for the subwatershed is 2.9 miles per square mile (Appendix B, FEIS). Some existing closed roads were re-opened for fire suppression activities.

#### Foreseeable Condition

Approximately 32.4 miles are road are proposed to be closed by gate, obliteration, earthen barrier in the Reynolds Creek subwatershed from the Mossy Decision. These closures would occur primarily in the North Fork of Reynolds Creek and Axe Gulch areas. Prior to the Easy Fire, a portion of the Mossy Access Plan had been implemented. It is foreseeable that the Mossy Access Plan will continue to be implemented in the Reynolds Creek subwatershed, which would reduce the open road density to 2.0 miles per square mile.

### Bridge Creek Subwatershed Road Density

#### Existing Condition

The current open road density for the subwatershed is 3.7 mi. /sq. mile (Appendix B, FEIS).

#### Foreseeable Condition

Approximately 17 miles of road would be closed in the Bridge Creek subwatershed in the Punch Timber Sale Environmental analysis. The Punch Access Plan was partially implemented at the time of the Easy Fire. It is foreseeable that the Punch Access Plan will continue to be implemented in the Bridge Creek subwatershed, which would reduce the open road density to 3.5 miles per square mile in this subwatershed.

### Clear Creek Subwatershed Road Density

#### Existing Condition

Since 1998 several road closures have been implemented in the subwatershed. The current open road density is 4.2 miles per square mile (Appendix B, FEIS). At the time of the Easy fire there were several timber sales that were almost completed, after which the remaining road closures would have been implemented. Several of the closure devices (such as gates) were already installed, and were to be closed once sales were completed.

#### Foreseeable Condition

An access travel management plan was developed in the Clear Creek Analysis for the entire Clear Creek subwatershed. The Clear Creek Analysis modified the Grouse Timber Sale Access Plan (signed 8/91). Several miles of road closures and decommissioning had been implemented in the Clear Creek subwatershed from the Clear Creek Analysis prior to the Easy Fire. It is foreseeable that the Clear Creek Access Plan will reduce the open road density to 3.0 miles per square mile for most of the year and 2.8 miles per square mile seasonally.

## Roadless Areas

The project is not within any inventoried roadless areas. Baldy Mountain roadless area is approximately three miles to the south. The project does not contain any areas that meet the

unroaded 1,000 acre standards in the Road Density Analysis Task Team Final Report (01/30/2002**).**

## Scenery

As viewed from US Highway 26 traveling east near Prairie City, the fire area is visible along a distant ridge top approximately 9 miles away. There is no visible contrast in color or form between unburned forested area on the closer unburned ridges and the burned ridge on the skyline. The same is true as viewed from State Highway 7. Over 50% of the middleground in the project area has been harvested in the last 30-year period. Due to the viewing distance, these harvest areas are difficult to see (even though many stands had most of the larger trees removed, greatly changing stand density and species composition). Other harvest areas on the ridge between Mossy Gulch and the John Day valley outside the project area are visible especially during the winter, when snow provides a bright contrast between the forest vegetation.

*Viewshed Corridor* – The middleground portion of the project area had forests that included mostly mixed conifer species, lodgepole pine, Douglas fir, grand fir and ponderosa pine. High burn severity areas (where almost all of the trees were killed), cover about 28 percent of the visual corridor. About 39 percent of the visual corridor has a moderate burn severity, where most of the trees were killed. About 33 percent of the visual corridor has a low burn severity where mortality was light and the stand was mostly underburned.

Currently there is little change in the amount of topography and land features that can be seen. The effects of the fire have not changed the visual condition. The Partial Retention visual quality objective is currently met with the existing condition.

## Rangeland Resources

The Easy Fire affected two grazing allotments. They are the Reynolds Creek and Sullens C&H allotments. The Sullens C & H allotment has been vacant for several years and has remained vacant after the fire. The Reynolds allotment is composed of the Danish and Reynolds Creek units. The Danish unit was not burned by the fire and is in active status. The Reynolds Creek Unit is inactive. The fire burned about 1,334 acres of the Reynolds Creek allotment and about 4,348 acres of the Sullens C&H allotment. Of those acres burned, about 4,872 acres have been identified as receiving a moderate to high severity burn.

## Heritage Resources

The project area was probably not used by humans until the Middle and Late Archaic times after 5000 B.C. (Hemphill et al. 1994). Located near the boundaries of the Columbia Plateau and Great Basin Cultural Provinces, the Cayuse, Umatilla, Paiute, Walla-Walla, Nez Perce and the Northern Paiute would have shared the area.

Surveys to date show limited use of the area by American Indian groups. Three historic sites and seven isolated finds are known to exist in the project area. The prehistoric isolated finds are probably related to small parties traveling through the project area between the more productive Main stem and Middle Fork John Day valleys, the Burnt River Valley, and the Malheur River drainage to the south (Hann, personal communication).

Historic use of the area is limited and appears in the form of a trail that bisects the broad ridgeline in the southwestern portion of the planning area. The trail appears to be related to early Forest Service administration and stock transportation. The trail appears on Forest maps dating back as far as 1917 and 1934. North of the planning area, are the remains of the Sumpter Valley Railway (SVR) system (Tonsfeldt, 1985, in Archaeological Invest. NW 1997). The SVR was extended from Austin toward Prairie City after 1905 (Ferrell, 1967). The Baker White Pine Lumber Company and the W.H. Eccles Lumber Company utilized the SVR for railroad logging operations in the Clear and Lunch Creek drainages between 1910 and 1929 (Ferrell 1967, in Archaeological Invest. NW 1997). This railway system never penetrated the project area probably due to elevation and lower quality timber (Hann, personal communication). Historically, the areas to the west and north again offered more opportunities for farming, mining, stock raising and settlement (Hemphill et. al, 1994).

Previous impacts to the project area include road building, timber harvest activities, and fire. The Easy Project Area has been grazed since the late 1800s, starting with sheep and converting to cattle. The area continues to be grazed by cattle. The first commercial timber harvest occurred in the late 1930s to early 1940s when trucks took over the railroads as the primary means of transporting logs to the mill.

## Culturally Important Plants

No tribes or groups of American Indians maintain treaty-reserved rights within the Easy Fire Recovery planning area. However, the planning area does lie within overlapping areas of interest that have been recognized for the Burns Paiute Tribe, the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and the Confederated Tribes of the Warm Springs Reservation (CTWSR). According to the Eastside Draft Environmental Impact Statement (Interior Columbia Basin Ecosystem Management Project, 1997), these areas of geographic interest are loosely based upon historic tribal ranges, traditional use areas, and zones of influence.

Plant food resources commonly used by Native Americans are sparsely distributed within the project area, and include Balsamroot (Balsamorhiza), Lomatium spp. (wild celery), and wild onion (Hemphill et al. 1994). Hemphill noted however, that far richer resources of the nearby John Day River valleys gave the planning area very low priority for wild plant food harvesting (Hemphill et al. 1994). Prehistorically, the valleys of the John Day and forests to the west and north offered better fishing, plant foods, climate, village sites and water (Hemphill et al. 1994).

## Sensitive Plant Species

One population of *Carex interior* is documented within the Easy Fire Recovery Project area. *Botrychium minganense* has been documented in Mossy Gulch. Potential habitat exists in the riparian areas of Clear Creek and Mossy Gulch for 11 species listed as Sensitive by the Regional Forester. These species are: *Botrychium ascendens, B. crenulatum, B. lanceolatum, B. minganense, B. montanum, B. pinnatum, Carex backii, C. interior, C. parryana, Listera borealis and Phacelia minutissima*.

## Invasive Species/Noxious Weeds

The fire and suppression activities have created ideal conditions for noxious weed spread. The fire removed competing plants and above ground shade, providing large expanses of bare soil and areas of soil receiving increased amounts of light. Suppression activities may have spread weeds from other areas since fire equipment was not cleaned before entering the fire area. Suppression equipment used many miles of local roads to access the fire, and constructed fire lines, safety zones, and drop points.

A 2003 field survey documented 74 weed locations within or adjacent to the Easy Fire project area. Six species of noxious weeds occur in or adjacent to the Easy Fire project area: dalmatian toadflax, yellow toadflax, diffuse knapweed, hound's tongue, spotted knapweed and St. Johnswort. Species of greatest concern are spotted knapweed, hound's tongue, dalmatian toadflax, yellow toadflax and diffuse knapweed, because these weeds can spread quickly, crowding out native plants, and are difficult to eradicate once established.

## Recreation and Recreation Opportunity Spectrum (ROS)

This area plays an important role by providing settings for various types of outdoor recreation. These activities include hunting, camping, driving in the woods, hiking, winter activities, firewood cutting, mushroom gathering, horn hunting and other activities. The project area Recreation Opportunity Spectrum (ROS) class is managed as roaded modified and roaded natural. Forest roads 2635 and 2600036 provide the main access for roaded and other recreational activities. All the roads are gravel-surfaced, one-lane, and native surface routes initially developed to provide timber and mineral access, and which now provides access for recreation activities.

There are about 4 miles of designated groomed snowmobile trail within the planning area on Forest Road 2635 which was not impacted by the fire. Two inventoried dispersed campsites are located within the project area in a meadow and on a ridge with an impact of a light burn.

The ROS is classified as roaded modified, which is characterized by a substantially modified natural environment (see Glossary). The ROS is a roaded modified and roaded natural. The fire substantially changed the scenic aesthetics of the project area (see Scenery).

# Management Areas and Objectives

## Relationship to the Forest Plan

This environmental assessment tiers to and relies upon the analyses for the Malheur National Forest Land and Resource Management Plan (Forest Plan), as amended. Amendments include but are not limited to the Regional Forester's Eastside Forest Plan Amendment #2 and the Interim Strategies for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California (1995) (PACFISH). Those analyses are documented in the Final Environmental Impact Statement and Record of Decision for the Forest Plan, and the Interim Management Direction Establishing Riparian Ecosystem and Wildlife Standards for Timber Sales (Eastside Forest Plan Amendment #2), and other related documents. These documents are incorporated by reference, as appropriate, throughout this environmental assessment. The Forest Plan, as amended, contains Forest-Wide Standards and Guidelines as well as Standards and Guidelines for specific management areas (such as MA-1 General Forest).

### Regional Forester's Forest Plan Amendments

Regional Forester's Eastside Forest Plan Amendment #2 (1995) is a Forest-Wide Standard and Guideline that contains direction for the development of timber sales. Amendment #2 changed standards for harvest of live trees, snag and down logs, goshawk habitat, connectivity of old forest, and riparian habitat. Salvage sales that do not harvest live trees, except for incidental live trees, are exempt from the ecosystem standards; but the riparian and wildlife standards still apply. The ecosystem standards do not apply since the only live trees to be cut are for road and landing construction, or for safety. The riparian and wildlife standards still apply since they have concerns for resources still present in a recently burned forest (and could be affected by salvage harvest).

### Management Areas within the Easy Fire Project Area

The Easy Fire Recovery Project area includes approximately 5,839 acres of National Forest System lands that are allocated by the Forest Plan, as amended, to management areas (see Figure 4, Map Section). Management area designations can overlap; when a specific segment of land falls under the goals of two or more management areas, acres are assigned to the higher priority management area. The following is a description of Management Areas in the Easy Fire project area:

Management Area 1 – General Forest (4,186 acres)

This management area provides for timber production on a sustained yield basis while providing for other resource values. The goal is to develop equal distribution of age classes to optimize sustained timber production. Generally, acres for MA 1 and MA 2 (see below) are combined (see Figure 4, Map Section).

The Forest Plan establishes an objective in MA 1 of creating a healthy forest condition characterized by a variety of age classes, through control of stocking levels, species mix, and protection from fire, insects, disease, and other damage. The Easy Fire Recovery Project Area contains approximately 4,186 acres of MA 1 and 2 combined.

### Management Area 2 – Rangeland (Acreage included in MA 1)

Management Area 2 consists primarily of non-forested grasslands and low elevation ponderosa pine sites unsuitable for timber production, and is usually included as non-forested lands within other management areas, primarily MA 1 – General Forest. The goal of this MA is to emphasize forage production on a sustained yield basis while providing for other resources and values.

### Management Area 3B – Anadromous Riparian Areas– and Riparian Habitat Conservation Areas (418 acres)

Management Area 3B consists of perennial streams and seasonally flowing streams, wetlands, and wet/moist areas such as meadows, springs, seeps, bogs, and wallows. The goal of MA 3B is to manage riparian areas to protect and enhance their value for wildlife, anadromous fish habitat, and water quality. MA 3B acres are also accounted for on an acre-basis within the Riparian Habitat Conservation Areas (RHCAs). The project area contains approximately 418 total acres within this Management Area. The Forest Plan amendment (Regional Forester's Amendment 2) for the Interim Strategies for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California (1995) (PACFISH) amended the Description and Standards for this management area by creating a management area called Riparian Habitat Conservation Areas (RHCAs). However, MA3B includes areas not addressed in PACFISH, for which standard RHCAs were not defined; these areas include dry aspen stands and ephemeral draws.

Riparian-dependent resources receive primary emphasis in all RHCAs. All project actions must be in compliance with PACFISH. The project area is not under the direction from Inland Native Fish Strategy (1995) (INFISH) because it is contains anadromous fish. Therefore, INFISH direction was not used for this project.

Standard Riparian Habitat Conservation Area widths are as follows:

> Fish-bearing streams (Category 1), such as Clear Creek and Mossy Gulch Creek: The area on either side of the steam extending from edges of active stream channel to the top of the inner gorge, or the outer edges of the 100-year floodplain, or the outer edges of riparian vegetation, or to a distance equal to the height of two site-potential trees, or 300 feet slope distance (600 feet, including both sides of the stream channel), which ever is greatest.
>
> Permanently flowing non-fish-bearing Streams (Perennial Streams or Category 2) such as unnamed tributaries or their beginnings to Clear Creek and Mossy Gulch Creek: The area on either side of the stream extending from edges of active stream channel to the top of the inner gorge, or the outer edges of the 100-year floodplain, or the outer edges of riparian vegetation, or to a distance equal to the height of one site-potential trees, or 150 feet slope distance (300 feet, including both sides of the stream channel), which ever is greatest.
>
> Ponds, lakes, reservoirs, and wetlands greater than 1 acre (Category 3): the body of water or wetland and the area to the outer edges of the riparian vegetation, or to the extent of the seasonally saturated soil, or to the extent of moderately and highly unstable areas, or to a distance equal to the height of one site-potential tree, or 150 feet slope distance from

the edge of the maximum pool elevation of constructed ponds and reservoirs or from the edge of the wetland, pond or lake, whichever is greatest.

Seasonally flowing or intermittent streams and wetlands less than 1 acre (Category 4): (1) The intermittent stream channel and the area to the top of the inner gorge, (2) the intermittent stream channel or wetland and the area to the outer edges of the riparian vegetation, and (3) the area from the edge of the stream channel or wetland to a distance equal to the height of one site potential tree, or 100 feet slope distance, which ever is greatest.

Road Best Management Practices and Timber Best Management Practices: Best Management Practices (BMPs) are the primary mechanisms to enable the achievement of water quality standards (Environmental Protection Agency 1987). BMPs have been selected and tailored for site-specific conditions to arrive at the project level BMPs for the protection of water quality.

### Management Area 13 – Old Growth (568 acres)

Management Area 13 is composed of mature and over mature trees (150 years or older). It is managed to provide: habitat for wildlife and plant species dependent on mature and over mature forest conditions; ecosystem diversity; and preservation of aesthetic qualities across the landscape. These areas are equally distributed across the Forest, providing an old growth network. Wildlife species dependent on these habitats include the pileated woodpecker and pine marten. MA-13 includes both dedicated and replacement old growth areas (see Figure 4, Map Section).

Replacement areas may not have all the characteristics of old growth, but are managed to achieve those characteristics so that when a dedicated old growth area no longer meets the needed habitat requirements, the replacement old growth can take its place.

### Management Area 14 – Visual Corridors (667 acres)

Management Area 14 consists of visible and potentially visible landscapes along major travel routes, and state scenic waterways where the traveling public has a high to medium sensitivity to scenery. A portion of the project area is within Management Area 14 (Viewshed Corridors) and encompasses those areas that are seen from State Highway 26 (see Figure 4, Map Section). The goal of MA 14 is to manage corridors within scenic viewsheds with primary consideration given to their scenic quality and the growth of large diameter trees. Forest Plan Correction #1, dated January 31, 1995, allows salvage harvest in a visual corridor without a corridor viewshed plan. The direction is to manage the area with visual quality objectives of partial retention in the foreground and modification in the middleground while providing for other uses and resources. The area within Management Area 14 within the Easy Fire Project Area is in the middleground.

### Other Ownership

All lands within the Easy Fire Recovery Project boundary are National Forest System lands. No other land ownership is directly affected by this proposal.

# Desired Condition

The desired character of this area is an environment that is healthy, sustainable, and supports the uses of the National Forest. Sustainability refers to the ability of both forest and non-forest vegetation to endure despite natural disturbances such as fire, insects, disease, and invasive species. Because of the major changes caused by the stand-replacing Easy Fire, desired condition should be considered on two time frames, short-term and long-term.

## Short-term Desired Conditions

The short term is generally considered to be 2-10 years. If a particular resource defines short term as longer than this time frame, it will be explained in the section for that resource in Chapter 3. The short-term desired conditions for the project area are as follows:

### Short-term Desired Condition of Forest Vegetation and Structure

- Areas deforested by fire and salvaged are reforested within 5 years and deforested areas not salvaged are reforested as soon as practicable – all forested areas are adequately stocked to meet resource and Management Area objectives (Regional Forester Letter dated 11/19/2002).

### Short-term Desired Condition of Wildlife Habitat

- Dedicated Old Growth and Replacement Old growth areas are distributed evenly across the landscape to provide for old-growth associated species on a Forest-wide basis.
- Snags and downed logs are retained at a density, size and distribution that address the needs of cavity dependent species in post-fire environments.
- Areas severely or moderately burned in the fire are reforested, with a species mix that reflects what existed historically.
- Open road densities are reduced in the fire area to reduce the potential for disturbance to various wildlife species.

### Short-term Desired Condition of Soils, Watershed, and Fisheries

- Ground cover meets Forest Plan Standards, so soil erosion is at acceptable levels.
- Detrimental compaction, displacement, puddling, and burning are at a practical minimum, and do not exceed 20% of the total acreage within an activity area.
- Gullies and areas of active erosion in uplands are stabilized and re-vegetating.
- Upland vegetation is re-established as described under Vegetation Section.
- Roads that are impacting streams and needed for future management activities are stabilized or improved to reduce chronic sediment sources.
- Roads that are impacting streams not needed for future management activities are decommissioned.
- Sediment from existing open roads is reduced by applying site specific Best Management Practices (BMP). Self-maintaining drainage is installed on closed roads to improve hydrologic function.
- Riparian areas are protected to prevent adverse effects on stream channel stability and fish habitat.

- Native hardwoods, sedges, rushes and grasses are colonizing and expanding in riparian areas and contributing to improved riparian and aquatic habitat.
- The project area has ground cover in the form of litter and vegetation; Stream shade from riparian hardwood shrubs is re-established.
- Large and coarse woody debris exists in stream channels within Forest Plan Standards to improve habitat complexity and quality for fish and in draws to reduce erosion and sediment movement.
- The project area provides snags that are available to fall into streams and ephemeral draws now and in the future.
- Point bars in streams are building and stabilizing, narrowing and deepening channels to improve hydrologic conditions and fish habitat.
- There are no significant reductions in water quality caused by land management activities
- State water quality standards are met by applying soil and water conservation practices. Water for non-consumptive uses including fish habitat, recreational uses, stream channel maintenance, and aesthetics is protected.
- Populations and distribution of redband trout increases as fish habitat improves.

### Short-term Desired Condition of Fuels

- The potential for extreme fire severity over extensive areas is reduced.
- A higher degree of defensible conditions with increased levels of firefighter safety exists.

### Short-Term Desired Economics/Social Condition

- The project area provides a mix of goods and services to meet public needs while protecting other resource needs.

### Short-term Desired Condition of Roads and Access

- Project area roads provide safe and adequate roaded access for forest-users while at the same time protecting wildlife and aquatic resources.
- Roads not needed for future management activities or for public access are closed and/or decommissioned to move open road density towards Forest Plan standards.
- Roads that are not decommissioned are improved to a more self-maintaining status so that less maintenance is needed and impacts from road sediment are decreased.
- The Malheur Forest Plan states that the desired future condition by 1999 is 3.2 mi./sq. mile in big game summer range.

### Short-term Desired Condition of Scenery

- Enough snags and logs are present to show that a wildfire was the cause of the openings.
- Vegetation includes vigorous growing native forbs grasses, sedges, shrubs, hardwoods and conifers providing visual diversity of colors and textures.
- Evidence of past management activities such as roads, stumps, skid trails and skyline corridors result in only a slightly altered landscape in the visual corridor.
- Opportunities are present to view wildlife, fish, and plant species, especially those that are found in a more open environment.

### Short-term Desired Condition of Rangeland

- In areas burned, the vegetative communities have recovered to the point of being able to support grazing by domestic livestock while maintaining or improving habitat conditions.
- Range improvements damaged in the fire are repaired and functioning correctly.
- Additional improvements (i.e. fences and water developments) necessary to promote distribution of livestock are present.

### Short-term Desired Condition of Heritage Resources

- All significant cultural resources have been identified and protected from the effects of management activities.
- Cultural resources have been interpreted to educate the public concerning the significance and sensitivity of the resource.

### Short-term Desired Condition of Culturally Important Plants

- Regeneration is vigorous and shrubs have developed several age classes. Native grasses, sedges, and forbs are more common because exotic plant species have decreased.
- American Indians are able to access traditional use areas to harvest culturally important plants and visit potential sacred areas that nourish their cultural identity.

### Short-term Desired Condition for Sensitive Plant Species

- Existing Carex interior and *Botrychium minganense* sites have begun to expand as roads that are impacting streams are stabilized, improved, decommissioned or obliterated and riparian areas are protected.
- Sensitive *Carex, Botrychium, Listeria*, and *Phacelia* species have begun to colonize in riparian area as roads that are impacting streams are stabilized, improved, decommissioned, or obliterated and riparian areas are protected.
- Riparian vegetation and downed wood provide shade and physical protection to maintain and expand sensitive plant populations.
- Invasive species are less common and do not compete with sensitive species.

### Short-Term Desired Condition of Invasive Species

- Weeds are treated quickly to control further spread and restrictions to management activities. Measures controlling permitted or public uses prevent weeds and non-native species populations from expanding.

### Short-Term Desired Condition of Recreation and Recreation Opportunity Spectrum (ROS)

- The area continues to provide a variety of recreational opportunities within the "roaded modified and roaded natural" ROS classification (see Glossary).
- Hazard trees are felled and open roads are safe to drive for recreational uses.
- Opportunities are present to view wildlife, fish, and plant species, especially those that are found in a more open environment.

## Long-term Desired Conditions

In addition to the desired conditions above, the long-term (20-150+ years), desired condition for the project area is the following:

### Long-term Desired Condition of Forest Vegetation and Structure

- In Cold Dry, Cool Dry, and Cool Moist plant association groups, seral species such as western larch, lodgepole pine, ponderosa pine, and western white pine will dominate the species composition in mostly even-aged patches during the earlier stages of successional development. With the exception of cold or cool site lodgepole stands, as stand development continues shade tolerant grand fir, subalpine fir, and Douglas-fir will increase in overall abundance at the expense of early seral species. Engelmann spruce will be present in significant proportions along riparian areas, and as a minor component in the moister stands. Through planting of rust resistant seedlings, western white pine will be present as a minor component along riparian areas and northerly aspects. The fire return interval is medium to long. Root diseases will continue to be a part of these forests. Armillaria root diseases will be present at levels that allow stands to develop to their successional potential. Spread of the disease will continue via root to root contacts in the soil, but the rate of spread will be decreased by maintaining healthy growing stands with higher proportions of Armillaria tolerant species.
- In Warm Dry plant association groups, large diameter ponderosa pine and western larch trees grow in open park-like stands dominated by large trees with occasional dense patches of small diameter stands. Stand density is maintained to achieve good growth rates for insect resistance (>1.0"DBH per decade). There are few understory trees that serve as ladder fuels spreading fire into tree crowns. Tree crowns are spaced wide enough to keep crown fires from spreading across whole stands of trees.

### Long-term Desired Condition of Wildlife Habitat

- Healthy, sustainable ecosystems provide for all life stages of management indicator species (MIS).
- Old growth habitat is common and connected to nearby similar habitat. A portion of this old growth is designated as Dedicated Old Growth or Replacement Old Growth and contributes to the Forest's old growth network.
- Snags and downed logs are developing or are present at historic levels, and provide quality habitat for species such as woodpeckers and martens.
- Open road densities remain below Forest Plan Standards, reducing potential for humans to disturb wildlife species sensitive to human interaction.

- Habitats better provide for species that are currently listed as threatened, endangered and sensitive.

### Long-term Desired Condition of Soils, Watershed, and Fisheries

- Riparian areas along streams and in smaller meadow and seep areas are in proper functioning condition with a diverse variety of native grasses, sedges, shrubs, hardwoods and conifers providing habitat for wildlife and fish.
- Stream channel integrity and function provide quality habitat for rearing and spawning to support healthy, native fish populations.
- Effective ground cover and stream shade are re-established. Temperatures are reduced in all streams. Streams are removed from the 303(d) list.
- Sediment is minimized on existing roads due to regular maintenance and reconstruction activities.
- Watershed function, from the uplands to the stream channels, is within the natural range of variation, allowing for human uses.

### Long-term Desired Condition of Fuels

- Fuel models will be maintained as fuel models 8 and 1.
- The potential for extreme fire severity over extensive areas is further reduced.
- A higher degree of defensible conditions with increased levels of firefighter safety exists.
- The optimum quantity of downed course woody debris (CWD) would be 5 to 15 tons/acre for Fire Regime 1.
- The optimum quantity of downed course woody debris (CWD) would be 10 to 25 tons/acre for Fire Regime 3 and 4.
- CWD fuel loading would meet the requirements for soils and wildlife habitat.
- A wildland fire would not lead to severe fire effects.

### Long-term Desired Economics/Social Condition

- Long-term economic and social stability is maintained by sustaining healthy forests and watersheds while providing sustainable harvest.
- The project area provides a wide range of social and economic benefits and opportunities through increased biological diversity (example, restoration of large trees and improvement of the watershed) in the area.

### Long-term Desired Condition of Roads and Access

- Transportation system is reduced so that road maintenance occurs at regular intervals with limited funding to minimize resource impacts.
- Roads are maintained at a level that minimizes their impact on water quality and fish habitat. Road densities and location provide necessary access and are compatible with the needs of wildlife and aquatic resources. Access is available for management activities, fire fighting, dispersed camping, hunting, fishing, sight-seeing, and other activities that the public enjoys. Native Americans are able to access traditional use areas.
- Many watersheds will have achieved road densities approaching the Malheur Forest Plan desired levels of 1.5 mi/sq. mile in summer range and 1.0 mi/sq. mile in winter range by the year 2039.

### Long-term Desired Condition of Scenery

- Natural appearing landscapes with high scenic diversity provide interesting and pleasant views for visitors.
- Visual quality objectives of partial retention and modification in the visual corridor and maximum modification outside the visual corridor are met or are higher than the minimum rating
- Scenic integrity is high in the visual corridor and moderate or better outside the visual corridor.

### Long-term Desired Condition of Rangeland

- The diversity of vegetative communities will be maintained or increased.
- All vegetation communities will be in a satisfactory or excellent condition.

### Long-term Desired Condition of Heritage Resources

- All significant cultural resources have been identified and protected from the effects of management activities.
- Cultural resources have been interpreted to educate the public concerning the significance and sensitivity of the resource.

### Long-term Desired Condition of Culturally Important Plants

- Aspen populations form continuous stringers from the smaller draws, joining with larger, sprawling stands in valley bottom meadows. Populations of native shrubs, grasses, sedges, and forbs are more common and there is a wider variety of species.
- Native vegetation occupies historical habitats. American Indian peoples are able to gather a wide diversity of species to provide for all traditional uses.

### Long-term Desired Condition of Sensitive Plant Species

- Plants that are uncommon because of limited habitat areas can be found in suitable sites throughout the project area.

### Long-term Desired Condition of Invasive Species

- Prevention strategies for such management activities as timber harvest, livestock grazing, firewood cutting, recreation activities and hunting, have reduced or eliminated the spread of new noxious weed populations.
- Aggressive control methods have decreased the number and types of existing exotic plant species and noxious weeds.
- Habitat conditions favor establishment and reproduction of native plants and non-native plants species are uncommon in both riparian and upland areas. By using native seed and planting native vegetation, the diverse and healthy native plant populations occupy their traditional habitats.

### Long-term Desired Condition of Recreation and Recreation Opportunity Spectrum (ROS)

- A variety of recreational opportunities exist in the project area in accordance with the "roaded modified and roaded natural" ROS classification.
- The area continues to provide roaded recreation and hunting opportunities.

# Proposed Action

The proposed action is an alternative developed early in the NEPA planning process to accomplish stated purposes, needs, and goals based on the best information available at the time. It is the first alternative offered and is used to identify issues and develop other alternatives for further study.

## Purpose and Design

One of the goals of the National Fire Plan is to reduce the impacts of unwanted wildland fires on communities, natural resources, and cultural resources. Past disruptions of natural fire cycles, as well as other management practices, have resulted in wildfires of increasing flame lengths and severity. Treatment of fuels will help reduce the impacts of wildfires and restore health to fire-adapted ecosystems.

Alternative 2 was designed to minimize the severity of future large-scale fire events and to allow for more frequent lower severity fire over the entire Easy Fire area. This alternative also meets the other identified needs including economically re-vegetating the greatest acres, providing the most volume for greater economic return to the Treasury and economic stability in the local area, addressing road access from roads analysis, and providing for wildlife habitat needs.

## Dead and Dying Tree Determination

Determining potential tree survivorship or mortality after a wildfire is often difficult because of the varied and complex factors governing the survival of fire injured trees. Numerous factors often interact to determine the fate of trees following wildfire, including, age, size, crown ratio, bark thickness, and other fire-resistance characteristics of the affected tree species; stand density, fuel loads, season of fire, and growing site quality characteristics. These factors influence the intensity and duration of the fire, and degree of damage to trees; and insect populations and disease status with affected stands.

The most current scientific literature available, which builds on past fire research efforts (Scott 1996) was published in November, 2002 and was written by Scott et al. It is titled "Factors Affecting Survival of Fire Injured Trees: A Rating System for Determining Relative Probability of Survival of Conifers in the Blue and Wallowa Mountains". Amendment 1 to this document was published in June, 2003. This document was written to provide a field rating system to determine potential survivorship or mortality of fire injured trees. Field verification of the rating system was conducted by Don Scott, Craig Schmitt, Lia Spiegel and Prairie City Ranger District personnel in June 2003 (Letter to District Ranger, 12/3/2003).

This rating system was used to determine those trees designated for salvage and are considered as dead. The rating system has a high degree of confidence in predicting

survivorship or mortality when a tree is classified as either high probability of survival or low probability of survival. Further discussion of vegetative response to fire can be found in the following documents: Scott et al, (2003), Scott et al, (2002), Schmitt and Spiegel (2002), Miller (2000), Johnson (1998), and Scott (1996).

## Forest Vegetation/Structure

Alternative 2 would harvest approximately 1,777 acres of dead and dying trees in 44 units to reduce future fuel loadings and capture the economic value of fire-killed and dying trees (Figure 18, Map Section). Total volume of commercial timber harvested is expected to be about 8 million board feet (MMBF). Only fire-killed trees and trees expected to die as a result of fire injury would be removed. Live trees that would jeopardize the safety of the harvest operation would also be harvested. Incidental live trees may be removed during temporary road and landing construction.

Harvest would be accomplished with tractor yarding on about 979 acres, skyline yarding on about 253 acres, and helicopter yarding on about 545 acres. Skyline and tractor unit landings are included in these acreages. The purchaser would subsoil skid trails on about 117 acres.

Roadside hazard trees along open roads and along any roads used for implementation of this project would be felled to provide safe and adequate roaded access in the fire area. Felled hazard trees in RHCAs would be left on site or used as in-channel wood; felled hazard trees outside of RHCAs would be removed as a commercial product. Roadside hazard trees not associated with a unit may only be removed without tracked or wheeled equipment leaving the road. Commercial timber harvested through roadside hazard tree removal is included in the acres and volumes listed above.

Approximately 1,721 acres inside of units and about 2,197 acres outside of units would be planted with western larch, ponderosa pine, western white pine, and Douglas-fir to reforest areas that sustained high tree mortality. Douglas-fir would not be planted in areas were Armillaria root rot is prevalent. All areas proposed for planting would be treated with big game repellant (BGR). Planting of 682 acres of existing plantations, including two harvest units that have not yet been planted, would also occur but are covered by existing NEPA decisions and are not part of this project proposal. Planting would be done to accelerate recovery of forest habitats. Site conditions would determine the species for planting in each area. Natural regeneration would occur on approximately 56 acres of lodgepole pine sites within the proposed post and pole harvest units and on about 490 acres outside proposed and existing harvest units. The remaining acres would remain fully stocked following harvest of the dead and dying material and would not require reforestation.

## Wildlife Habitat

### Snags

In all salvage harvest units, snags 21 inches dbh or greater would be retained at the Forest Plan standard of 2.39 snags per acre to provide habitat for cavity dependent species. If snags greater than 21” dbh are not available, an appropriate number of snags of the largest representative diameter class would be retained. The snags would be averaged on a 40-acre basis and would be left in small clumps (2 –6 acres). Outside salvage units, all snags would be retained except those felled along open roads to reduce safety hazards. These areas outside

the units include approximately 1,199 acres of forested areas classified in the mixed-conifer habitat type (DecAID) that would improve the snag distribution. In harvest units snags would not be retained within 150' of open roads or within one tree height of improvements such as fences; nor would snags be retained where they're likely to be felled because their accessibility makes them prone to felling for other reasons such as firewood cutting.

Snags marked for retention should be hard snags. Hard snags will last longer and provide habitat for a longer period of time. Soft snags are available currently to provide nesting habitat. Snags with broken tops are preferred, since shorter snags tend to stand longer. Snags that already have woodpecker cavities would be retained if found.

### Forest Plan Management Area 13 (MA-13) - Dedicated Old Growth (DOG) and Replacement Old Growth (ROG)

Alternative 2 would designate old growth areas to replace those lost to the fire (see Figure 9, Map Section, for original and replacement DOG/ROG locations). The relocation of Dedicated Old Growth and Replacement Old Growth areas should maintain the integrity of the Forest's old growth network. DOG/ROG 364 is located within the burn area (see Figure 9, Map Section). Prior to the fire, DOG/ROG 364 contributed towards pileated woodpecker and pine marten management requirements.

Fire intensities ranged from moderate intensity, mosaic burns or severe intensity in both dedicated old growth areas. There were several small areas that remain unburned.

Dedicated Old Growth (DOG) 364 would be relocated outside the fire perimeter since most of it burned in the Easy Fire. Areas outside the fire perimeter in the Reynolds Creek subwatershed, Mossy Gulch and North Reynolds Creek provide large sized blocks of mature and old growth habitat.

The Easy fire consumed the entire mature and old growth habitat remaining in the project area that met pileated woodpecker, pine marten or three-toed woodpecker habitat requirements, based on the current Forest Plan guidelines. The Dedicated and Replacement Old Growth areas are no longer functioning as old growth. Stands have been converted to understory re-initiation (UR) and stand initiation (SI) structural stages. Canopy cover has been reduced below 20% and in many places eliminated. Snags resulting from the fire will provide nesting and foraging habitat for northern three-toed woodpeckers though.

The fire also destroyed old growth habitat outside of the Dedicated and Replacement Old Growth areas. Post-fire evaluation determined, there was essentially no (0) acres of old growth remaining in the project area (see Forest Vegetation Section). The suitable old growth remaining is small and highly fragmented, and although vegetation conditions may classify these areas as old growth, they likely provide for few old-growth dependent species. These old growth conditions may be important as legacy structures in future stands.

A nonsignificant Forest Plan Amendment would be required to change the designation of the DOG and ROG from MA-13 – Old Growth to MA-1 – General Forest; and designate a new DOG and ROG, changing them from MA-1 to MA-13.

### Proposed Treatments within Dedicated (DOG) and Replacement Old Growth (ROG)

Existing DOG/ROG 364 would be converted to general forest (MA-1). Harvest and fuel reduction would occur as described under Forest Vegetation/Structure, Fuels, Roads/Access, and Wildlife Habitat.

## Fuel Condition

Fuels, including those created by the fire and by salvage activity, would be reduced on about 1,777 acres within the harvest units (Figure 21, Map Section). Fuel models after harvest and post harvest treatments, including standing dead, will vary from FM 8 to 11 to 12 depending on harvest method and limb breakage. It is not the intent of this proposal to reduce severity on every acre. The intent is to reduce fuels where feasible and economically viable to break up the fuels continuity before the next wildland fire event and to allow for future prescribed fire.

Fuel treatment methods would include whole tree yarding, yarding with limbs attached to logs, grapple piling and burning, yarding with tops attached, and lop and scatter (see Glossary). Approximately 513 acres would have whole tree yarding during harvest; 206 acres would have yarding with limbs attached to logs during harvest; 456 acres would have grapple piling and burning of piles; 57 acres would have yarding with tops attached; and 545 acres would only have lop and scatter. Utilization of the biomass in landing piles could occur if there is a market or the piles would be burned. Acres of post-harvest treatment will be verified after harvest. No fuel reduction would occur on 4,062 acres within the Easy fire area.

## Roads/Access

Alternative 2 would construct about 0.7 miles of temporary road to allow access to harvest. (Figure 28, Map Section). Of these temporary road miles, about 0.2 miles are existing rehabilitated temporary road and about 0.5 miles are decommissioned roads that would be re-opened as temporary roads. All miles of temporary road would be stabilized and decommissioned after harvest activities.

A year-round road closure is proposed for Rd. 2600391. All 5.2 miles of this road (4.6 miles inside the project area and 0.6 miles outside) would be closed year-round to public use. The purpose of the road closure is to reduce road densities in the project area where deer and elk security habitat has been affected by the fire and to meet Forest Plan standards.

Approximately 0.3 miles of the 2600026 road would have grid-rolled material added to bridge over an existing wet spot to eliminate rutting and soil movement. About 59.4 miles (34.0 miles of road within the project area and about 25.4 miles outside the project area) would have maintenance performed to allow better access to harvest areas and to reduce impact to other resources.

Alternative 2 would prescribe spot rocking as well as water for dust abatement and other road maintenance methods. See Figure 32, Map Section for location of rock sources and water sources.

## Forest Plan Amendments

An amendment would be required to implement alternative 2. The proposed action was designed, in part, to replace Dedicated Old Growth that is now unsuitable due to the fire. Selecting *Alternative 2 would include a site-specific, amendment* (Management Area designations) to the Malheur National Forest Plan, as amended. The amendment would relocate DOG and ROG 364 outside the fire perimeter and convert the original acres to MA-1.

Selection of this alternative would meet Forest Plan Standards and Guidelines (36 CFR 219.10 (c)).

See also Chapter 2 for a description of the alternatives.

## Actions Outside of this EIS to Address Recovery Needs

The proposed project activities described in this FEIS do not address all the desired conditions in the project area. The following projects located within the Easy Fire project area were identified through the planning process to help move the project area towards desired conditions.

The Forest Service will complete several watershed restoration projects associated with the Easy Fire under separate decisions on Categorical Exclusions or Environmental Assessments. The following projects are scheduled for completion in the next five years in the Easy Fire Recovery area:

- Replanting existing plantations – approximately 650 to 680 acres will be replanted in 2003 and 2004 under existing NEPA decisions, depending on the alternative selected.
- The riparian areas adjacent to Units 21, 22, 30 and 65 will be planted with appropriate conifer, hardwood and shrub species along the intermittent stream channels, to speed the recovery of the riparian vegetation and overstory shade, and for future woody debris recruitment.
- Reconstruction of approximately three miles of fire damaged fences in the Reynolds Allotment.

The following are implemented through administrative decisions outside of this EIS:

- Commercial and personal use firewood cutting would be delayed until 2008 for all alternatives, including No Action.
- To allow vegetation and riparian areas to recover, livestock grazing would be delayed for two or more years depending on fire severity and whether monitoring shows that the range resource is ready after two growing seasons or not. This will comply with the Forest's post burn grazing guidelines. Grazing may be delayed for a longer period if necessary to meet other resource objectives.
- The fire area would be open to all other usual Forest-wide accepted activities, including mushroom gathering, hunting, and recreation, which are outside the scope of this project. Designated roads would be opened to the public after hazard trees are felled.

# Decision Framework

The Responsible Official for this proposal is the Forest Supervisor of the Malheur National Forest. Based on the analysis disclosed in the Final EIS, the Responsible Official will make a decision and document the decision in the Record of Decision (ROD).

The responsible official may decide to:

- Select the proposed action, or
- Select another action alternative that has been considered in detail, or
- Modify an action alternative, or
- Select the no-action alternative.

The Responsible Official will determine if the selected alternative is consistent with the Forest Plan, and will require an amendment to the Forest Plan if Alternative 2, 3, 4 or 5 is selected (see Chapter 2, Alternatives Considered in Detail).

# Public Involvement

## Initial Scoping

The project was listed in the Summer/Fall 2002 through Summer 2004 Schedules of Proposed Activities (SOPA). In addition, as part of the public involvement process, an Open House was held at the Federal Building in John Day on February 13, 2003; on February 14, 2003, the agency mailed a scoping letter seeking public comment to approximately 130 groups, other agencies, and individuals who had previously shown interest in Malheur National Forest projects.

A Notice of Intent (NOI) to complete an environmental impact statement for the Easy Fire Recovery Project was published in the Federal Register on March 24, 2003. The NOI asked for public comment on the proposal by April 30, 2003.

In response to these scoping efforts, written comments were received from 9 interested parties:

- Jeffrey E. Ritter
- Greg Jackson/Jackson Oil Inc., et al.
- Leeanne Siart/Oregon Natural Resources Council
- Rachel Thomas
- Bill Wilcox
- Thomas Partin/American Forest Resource Council
- Steven J. Courtney/Malheur Lumber Company
- Rick Brown/Defenders of Wildlife
- Blue Mountain Biodiversity Project – Karen Coulter

The District received comments supporting the project as well as comments reflecting concerns related to potential adverse impacts on soils, wildlife habitat, aquatic habitat, water

quality, and economics. Public comments were used in the development of the reasonable range of alternatives and the identification of the key issues.

### DEIS Comments and Responses

The Easy Recovery Project DEIS was completed in October 2003, and was made available to the public the week of October 13, 2003. The 45 day review period began on October 24, 2003, the day the Notice of Availability was printed in the Federal Register. The DEIS was mailed to over 100 interested publics. Additional copies were given to other individuals, agencies, and groups following the initial mailing. Written comments were received from 10 individuals, agencies, and groups. These comments, with agency responses, are located in Appendix I of the FEIS.

## Coordination with Other Governments and Agencies

The Prairie City District staff contacted three tribes that have rights or interests in the Easy Fire Recovery area: the Confederated Tribes of Warm Springs, the Confederated Tribes of the Umatilla Indian Reservation, and the Burns Paiute Tribe. Based on a government-to-government relationship, the purpose of the contact was to exchange information, answer questions, and to work closely and continuously with each other to integrate tribal rights and interests in the planning process. The Burns Paiute Tribe provided comments.

Coordination has also occurred with federal, state, and local government officials (see also Chapter 4). The National Oceanic and Atmospheric Administration-Fisheries (NOAA), U.S. Fish and Wildlife Service, and U.S. Environmental Protection Agency have been kept informed of proposed activities. Information has been provided to and exchanged with state agencies.

Using the comments from the public, other agencies, and tribes, the interdisciplinary team developed a list of issues to address.

## Issues

Significant issues, known as “key issues” in this analysis, for the Easy Fire Recovery Project, came from the public, other agencies, organizations and businesses, and Forest Service resource specialists. Issues are defined as a point of discussion, debate, or dispute about environmental effects. Issues are “significant” because of the extent of their geographic distribution, the duration of their effects, or the intensity of interest or resource conflict (40 CFR 1508.27). The key issues are used to formulate alternatives, prescribe mitigation measures and analyze environmental effects. All five key issues in this analysis were originally identified by the IDT, and all were emphasized in letters from the public.

Key issues are normally considered the basis for alternative development. However, there are a variety of ways to address key issues within any specific alternative. Key issues may be addressed by simply avoiding environmental consequences by elimination of an action that would impact a given resource. For example, if impacts to a specific stream segment are a key issue, the project alternatives that avoid all potential impacts to the stream segment addresses this issue. Mitigation attached to specific alternatives may also address key issues.

In addition to key issues identified by the IDT, there are "other analysis" issues addressed in the effects analysis and often used to compare alternatives. For example, heritage resources will always be addressed in actions that have site-specific ground disturbing actions. Although, alternatives may not be designed specifically to address heritage resources, the consequences of all the alternatives must be measured against compliance with direction to provide adequate protection for these resources (see Other Analysis Issues and Concerns, this chapter).

The environmental consequences of the proposal are disclosed in Chapter 3 for each resource affected by the key issues. Each key issue has indicators to allow members of the public and the Responsible Official to determine how well issues are addressed by the alternatives (see Table 2-9, Chapter 2 for effects of the alternatives on significant issues). A summary of each issue and its indicators is given below.

### Key Issue #1: Wildlife

*Issue:* Several public letters raised concern over the snag retention strategy. Wildlife species use burned forest habitats differently than live, green forests. In post-fire habitats, minimum Forest Plan snag standards may not be sufficient to assure use by all primary cavity excavators. Snag density, size and distribution influence use levels and vary by individual species. Salvage logging could potentially have negative impacts on cavity dependent species, particularly such species as the black-backed woodpecker. The alternatives retain varying levels and sizes of snags.

*Measurements*:

- Snag Management – does the alternative meet Forest Plan standards, would a Forest Plan amendment be needed.
- Snag Retention/Snag Management Areas – number of, size of, and spatial location of snag retention areas.
- Snag Levels within harvest treatment areas (number of snags per acre) which indicates the alternatives' ability to meet the 100% potential population level for primary cavity excavators as required by the Malheur Forest Plan,
- Cavity Excavator Use Level (tolerance levels for post-fire habitats) as described in the DecAID analysis tool (Mellen 2003).
- Down wood retained within harvest treatment areas.

### Key Issue #2: Water Quality and Fish Habitat

*Issue:* Water quality and fish habitat are key resources in maintaining ecosystem sustainability. Forest management activities, such as timber harvest, mechanical fuels treatments, temporary road construction, and system road maintenance are ground disturbing activities. These activities could potentially increase sedimentation and stream turbidity, and the amount and timing of overland flow, which could affect water quality and fish habitat for resident and anadromous threatened species.

Proposed activities may adversely affect threatened bull trout and steelhead, chinook salmon, and redband and cutthroat trout fish populations, within or near the project area.

*Measurements:*

- Acres of harvest on high severity (as mapped by the BAER team), moderate slopes (31-60%).
- Miles of existing haul roads within RHCAs by stream categories.
- Average proximity of units to listed fish bearing streams on high BAER burn severity, moderate slopes.

### Key Issue #3: Soils

*Issue:* Concern has been expressed that using mechanized equipment to salvage timber and reduce fuels would increase soil erosion risk and decrease soil productivity, especially on soils burned with high and moderate severity. The amount, method and timing of timber harvest would influence the amount of soil disturbance (compaction, displacement, puddling) and resultant surface erosion, which could have an effect on soil productivity.

*Measurement:*

- Acres of ground-based (tractor) salvage harvest on soils that burned with high and moderate severity.

### Key Issue #4: Fuels

*Issue:* At the heart of this issue is the scientific controversy relevant to the benefits of using salvage harvest to reduce fuels in order to reduce potential effects of future fire events. The "Beschta Report" (Beschta, 1995) advocates a passive approach to fuels management in burned areas and recommends that natural processes are best for management of fuels. Others suggest that salvage harvest is the best way to reduce the potential for another cycle of heavy fuel accumulations therefore, allowing future management the opportunity to restore the landscape to historic fuel models. The lack of empirical data on the effects of post fire salvage versus future fire severity demonstrates the complexity of this issue to quantify short and long term impacts of fuel reduction, but does not override the evidence in all fire dependent ecosystems that less fuel equals less fire resulting in less fire effects, i.e., less severity to soils and forest mortality.

*Measurement:*

- Future fire severity in 25 years as predicted by post-treatment fuel loading (tons/acre).
- Predicted smoke emissions 25 years from now (tons per acre and parts per million).

### Key Issue #5: Socio-Economics

*Issue:* Commercial value of fire-killed trees will deteriorate quickly if not salvaged. Recovery value of timber will have an effect on the local economy. Economically viable timber sales are important to local communities. The social and economic well-being of residents and local governments is dependent on employment and revenues generated from timber sales, fuel treatments, and reforestation. The methods of harvest, any delays in harvest, and size of timber could affect the economic viability of timber sales within the fire area.

*Measurements*:

- Net volume of commercial harvest (MMBF and CCF)
- Acres of commercial harvest
- Value of commercial harvest (million dollars)
- Present Net Value
- Jobs provided over a two-year period

## Other Analysis Issues and Concerns

Other analysis issues are issues addressed in the effects analysis and used to compare alternatives. The following analysis issues and concerns raised by the public and Forest Service Resource specialists are important and were considered as this project was developed and analyzed. These issues did not drive alternatives, but they were addressed or used in this analysis**.** Other analysis issues are listed here and analyzed in Chapter 3. Some issues are already addressed through other processes or in the Forest Plan, some led to mitigation measures (see Management Requirements and Mitigation Measures in Chapter 2), and some are analyzed in Chapter 3.

Some issues fit into the following categories: 1) outside the scope of the proposed action; 2) already decided by law, regulation, Forest Plan, or other higher level decision; 3) irrelevant to the decision to be made; or 4) conjectural and not supported by scientific or factual evidence. The Council on Environmental Quality (CEQ) NEPA regulations require this delineation in Sec. 1501.7: "identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3)."

The following is a list of other issues and reasons regarding their categorization as, or a reference to a location in this EIS where that issue is addressed. A brief response follows the concern in italics.

### Forest Vegetation/Structure

There are issues that remaining live trees may be at risk from insect attacks or catastrophic reburn in the future. *This is discussed in Chapter 3 in the Forest Vegetation, Living Trees section.*

There is an issue that the methods used for timber harvesting and species used in reforestation could increase the spread of Armillaria and Annosus root diseases. *This is discussed in the Forest Vegetation, Living Trees section.*

There is an issue that removing burned trees may reduce crucial shade for the reestablishment of seedlings. *This is discussed in Chapter 3 in the Forest Vegetation, Shade and Microclimate section.*

There is an issue that natural reforestation may not be successful, and conversely, that planting may not be necessary to establish reforestation. *This is discussed in Chapter 3 in the Forest Vegetation, Reforestation section.*

There is an issue that the future forest vegetation needs to be more resilient and sustainable and able to withstand periodic natural disturbances. *This is discussed in Chapter 3 in the Forest Vegetation, Future Stand Resiliency section*.

There is an issue that management focuses on reestablishment of the historic range of structural stages. *This is discussed in Chapter 3 in the Forest Vegetation, Structural Stages section.*

## Wildlife Habitat

There is an issue that salvage logging and fuels reduction activities could adversely affect management indicator species (MIS) and featured species identified in the Forest Plan. *This is discussed in Chapter 3, Environmental Consequences in the Wildlife section.*

There is an issue that salvage logging and fuels reduction activities could adversely affect threatened, endangered and sensitive wildlife species. *This is discussed in Chapter 3, Environmental Consequences in the Wildlife section and in the Biological Evaluation in Appendix D.*

Many populations of neotropical migratory bird species are considered in decline (Saab and Rich 1998, Altman 2000, Sharp 1996). Habitat loss is considered the primary factor for population declines. There is an issue that salvage logging and fuels reduction activities could contribute to further population decline. *This is discussed in Chapter 3, Environmental Consequences in the Wildlife section.*

One public letter raised the issue that the proposed replacement of Dedicated Old Growth (DOG) areas burned in the fire is not an action connected to salvage logging and therefore, should not be analyzed under this NEPA document. *This is incorrect. To salvage log these areas, there is a need to convert MA-13 Old Growth to MA-1 General Forest, and to evaluate the effects of these land use changes to the Forest's old growth network. This is discussed in Chapter 3, Environmental Consequences in the Wildlife section.*

Two letters expressed opposition to the objective (in the Purpose and Need section) of designating new Dedicated Old Growth and Replacement Old Growth areas to replace the DOGs and ROGs that burned in the fire and are no longer suitable. The letters raised the issue that DOG and ROG boundaries should not be moved simply because of events such as fires. T*his is discussed in Environmental Consequences for the alternatives in the Wildlife section under the Old Growth subheading in Chapter 3.*

There is an issue that salvage harvest could affect lynx populations. *This is discussed in the Wildlife Biological Evaluation for TES species (Appendix D). There is no lynx habitat identified in the project area.*

## Water Quality and Fisheries

There is an issue that site specific Best Management Practices (BMPs) may not be effective. *This is discussed in Environmental consequences in the Fisheries and Watershed section of Chapter 3.*

There is an issue that proposed activities may degrade watershed conditions downstream of the project area. *This is discussed in the Cumulative Effects section of Environmental Consequences in the Fisheries and Watershed section of Chapter 3.*

Fish species distribution and populations are controlled by water quality and habitat quantity/quality. There is an issue that salvage harvest, fuels reduction and road activities could further impact populations of bull trout, summer steelhead, redband trout, spring chinook, and westslope cutthroat trout by degrading water quality and fish habitat quantity/quality or by directly or indirectly modifying stream channel morphology. *This is*

*discussed in Environmental Consequences in the Fisheries and Watershed section of Chapter 3 and the BE.*

## Soils

There are issues about existing soil conditions and quality, adverse impacts to soils (especially impacts from ground based logging equipment and subsoiling on erosion, displacement, and compaction), and loss of nutrients on areas of moderate to high BAER burn severity. *These concerns are discussed under Soils in Chapter 3.*

There are issues about logging impacts on mycorrhizae fungi and other soil biota. *Effects of post-fire logging of dead and dying trees, on soil biota, and effects of changes in soil biota on soil quality, are conjectural. There is no scientific literature on these subjects. In rare cases, tree regeneration has failed in clearcuts of live trees west of the Cascade Mountains because of a deficiency of mycorrhizal fungi. However, on the Malheur National Forest, no such regeneration failures have been reported, even after harvest of live trees.*

## Fuels

There is an issue that piling and burning could result in air quality impacts with the potential to exceed standards. *This is discussed in Chapter 3 in Fire and Fuels under the Air Quality section.*

There is an issue that the many continuous acres of standing dead trees in the Easy Fire area could pose a risk to for public and firefighter safety. *This is discussed in Chapter 3 in Fire and Fuels under the Public and Firefighter Safety section.*

## Roads/Access

Some members of the public question the need to close or decommission roads. *This is discussed in Environmental Consequences for the alternatives in the Roads/Access, Wildlife, Fish and Water Quality sections in Chapter 3.*

There is an issue that closing and decommissioning roads could affect forest users. *This is discussed in Environmental Consequences for the alternatives in the Recreation, Rangeland Resources, and Economics/Social sections in Chapter 3.*

## Scenery

Portions of the fire area fall within Management Area 14. While the fire has already affected the visual quality of the area, harvesting patterns, harvesting of live trees, and the time it takes to reforest could have further effects on visual characteristics of the area.
*This is discussed in Environmental Consequences for the alternatives in the Scenery section in Chapter 3.*

## Rangeland

There is an issue in how the fire and proposed actions will affect livestock management in the project area. *This is discussed in Environmental Consequences for the alternatives in Rangeland Resources in Chapter 3.*

There is an issue that there needs to be a recovery period after burning before grazing is resumed. *A recovery period will occur in all alternatives. This is discussed under Actions Outside of this EIS to Address Recovery Needs (Chapter 1), and in Rangeland Resources in Chapter 3.*

### Heritage

Archaeological and historic sites could be affected by proposed activities. *This is discussed in Environmental Consequences for the alternatives in the Heritage section in Chapter 3 and is addressed by mitigation measures in Chapter 2.*

### Culturally Important Plants and Sensitive Plant Species

Native Americans are concerned that proposed activities may impact culturally important plants and tribal uses of these plants in the project area. *This is discussed in Environmental Consequences in the Botanical Resources section of Chapter 3.*

Known sensitive plants may be impacted by salvage operations and work done on roads. *This is discussed in Environmental Consequences in the Botanical Resources section of Chapter 3 and in the BE.*

### Invasive Species

There is an issue that proposed activities could spread invasive plant species: both noxious weeds and non-native, introduced species. *This is discussed in Environmental Consequences in the Botany section of Chapter 3.*

### Recreation and Recreation Opportunity Spectrum (ROS)

There is an issue that proposed activities could affect recreation. *This is discussed in Environmental Consequences for the alternatives in the Recreation section in Chapter 3.*

### Roadless/Unroaded

There is an issue that the Easy Fire Recovery Project may affect roadless and contiguous roadless areas. *The proposed treatments are consistent with management direction in the Malheur Forest Plan (1990) and current Forest Service roadless direction. There are no 1000 acre contiguous unroaded areas or inventoried roadless areas in the project area (project record, GIS analysis). The inventoried roadless areas are identified in the Forest Service Roadless Area Conservation FEIS, Vol. 2 (USDA Forest Service 2000). Baldy Mountain roadless area is approximately three miles to the south. Discussion of the direction and effects are further discussed in Chapter 3, Other Disclosures, Unroaded.*

## Laws and Regulations

The following legal requirements, coordination, and regulations pertain to this FEIS:

### The Preservation of American Antiquities Act of 1906:

This Act makes it illegal to "appropriate, excavate, injure, or destroy any historic or prehistoric ruin or monument, or any object of antiquity, situated on lands owned by the Government of the United States, without the permission of the Secretary of the Department of the Government having jurisdiction over the lands on which said antiquities are situated."

### The National Historic Preservation Act:

This Act requires Federal agencies to consult with State and local groups before nonrenewable cultural resources, such as archaeological sites and historic structures are

damaged or destroyed. Section 106 of this Act requires Federal agencies to review the effects project proposals may have on the cultural resources in the Analysis Area.

## The Endangered Species Act of 1973, as amended:

The purposes of this Act are to "provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in subsection (a) of this section." The Act also states "It is further declared to be the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act."

## The Migratory Bird Treaty Act of 1918:

The purposes of this Act are to establish an international framework for the protection and conservation of migratory birds. The Act makes it illegal, unless permitted by regulations, to "pursue, hunt, take, capture, purchase, deliver for shipment, ship, cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in this Convention. . . for the protection of migratory birds. . .or any part, nest, or egg of any such bird" (16 USC 703). The original 1918 statute implemented the 1916 Convention between the United States and Great Britain (for Canada). Later amendments implemented treaties between the United States and Mexico, Japan, and the Soviet Union (now Russia).

## The National Environmental Policy Act (NEPA) of 1969, as amended:

The purposes of this Act are "To declare a national policy which will encourage productive and enjoyable harmony between man and his environment, to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality" (42 U.S.C. Sec. 4321). The law further states "it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans" [42 U.S.C. Sec. 4331(a)]. NEPA establishes the format and content requirements of environmental analysis and documentation, such as the Easy Fire Recovery Project.

## The National Forest Management Act (NFMA) of 1976:

This Act guides development and revision of National Forest Land Management Plans and has several sections to it ranging from required reporting the Secretary must submit annually to Congress to preparation requirements for timber sale contracts. There are several important sections within the act, including Section 1 (purpose and principles, Section 19 (fish and wildlife resource), Section 23 (water and soil resource), and Section 27 (management requirements).

## The Clean Water Act, as amended in 1977 and 1982:

The primary objective of this Act is to restore and maintain the integrity of the nation's waters. This objective translates into two fundamental national goals: 1. Eliminate the discharge of pollutants into the nation's waters; and 2. Achieve water quality levels that are fishable and swim-able. This Act establishes a non-degradation policy for all Federally proposed projects.

## The Clean Air Act, as amended in 1990:

The purposes of this Act are "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population; to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution; to provide technical and financial assistance to State and local governments in connection with the development and execution of their air pollution prevention and control programs; and to encourage and assist the development and operation of regional air pollution prevention and control programs."

## Multiple-Use Sustained-Yield Act of 1960

The Multiple Use - Sustained Yield Act of 1960 requires the Forest Service to manage National Forest System lands for multiple uses (including timber, recreation, fish and wildlife, range, and watershed). All renewable resources are to be managed in such a way that they are available for future generations. The harvesting and use of standing timber can be considered a short-term use of a renewable resource. As a renewable resource, trees can be re-established and grown in again if the productivity of the land is not impaired.

## Treaty with the Walla Walla, Cayuse, and Umatilla Tribes, June 9, 1855, and Treaty with the Tribes of Middle Oregon, June 25,1855:

These treaties established "That the exclusive right of taking fish in the streams running through and bordering said reservation is hereby secured to said Indians, and at all other usual and accustomed stations, in common with citizens of the United States, and of erecting suitable house for curing the same; also the privilege of hunting, gathering roots and berries, and pasturing their stock on unclaimed lands, in common with citizens, is secured to them." All actions to be taken must fully consider and comply with Native American treaty rights.

The project area falls within lands ceded by the Confederated Tribes of the Warm Springs Reservation and within lands that have an overlap of use with the Umatilla Tribes. These tribes have reserved rights to anadromous fish, and Federal court decisions have specifically established that the tribes have treaty rights to an equitable share of the Columbia Basin fishery resource (CRITFC 1995, Vol. I, p. 4-1 – 4-3).

## Public law 92-488:

This law recognizes the Burns Paiute Tribe and their reservation. As a Federally recognized tribe, the Burns Paiute Tribe retains rights of inherent sovereignty. The project area is within the traditional and current use area of the Burns Paiute Tribe.

## Migratory Bird E. O. 13186:

On January 10, 2001, President Clinton signed an Executive Order" (E.O. 13186) titled "Responsibilities of Federal Agencies to Protect Migratory Birds." This E.O. requires that *"environmental analysis of Federal actions, required by NEPA or other established*

*environmental review processes, evaluate the effects of actions and agency plans on migratory birds, with emphasis on species of concern."*

## Natural or Depletable Resource Requirements and Conservation Potential:

The Easy Fire Recovery Project has been designed to conform to applicable laws and regulations pertaining to natural or depletable resources, including minerals and energy resources. Regulations of mineral and energy activities on the National Forest, under the U.S. Mining Laws act of 1872 and the Mineral Leasing Act of 1920, are shared with the Bureau of Land Management. The demand for access to National Forest System lands for the purpose of mineral and energy exploration and development is expected to increase over time.

## Environmental Justice:

On February 11, 1994, President Clinton signed Executive Order 12898. This order directs each Federal agency to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. On the same day, the President also signed a memorandum emphasizing the need to consider these types of effects during NEPA analysis. On March 24, 1995, the Department of Agriculture completed an implementation strategy for the executive order. Where Forest Service proposals have the potential to disproportionately and adversely affect minority or low-income populations, these effects must be considered and disclosed (and mitigated to the degree possible) through the NEPA analysis and documentation (see Environmental Justice, Chapter 3).

## Prime Farmland, Rangeland, and Forestland:

All alternatives are in accordance with the Secretary of Agriculture Memorandum 1827 for prime farm land, rangeland, and forest land. "Prime" forestland is a term used only for non-Federal land, which would not be affected by proposed alternatives. Regardless of the alternative selected, National Forest System lands would be managed with sensitivity to adjacent private and public lands.

## Floodplains and Wetlands

The proposed alternatives would have no impact on floodplains or wetlands as described in Executive Orders 11988 and 11990.

Wetlands that meet the Jurisdictional Definition (Corps of Engineers) are found in the Easy Fire Area. These areas will be mapped as described in Mitigations (Chapter 2) and avoided during harvest and fuel treatments.

## Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974 (as amended)

This act directed the Secretary of Agriculture to prepare a Renewable Resources Assessment and updates. These assessments include "an analysis of present and anticipated uses, demand for, and supply of the renewable resources, with consideration of the international resource situation, and an emphasis of pertinent supply, demand and price relationships trends." The USDA Forest Service Forest Inventory and Analysis unit provides updates for this assessment.

### Executive Order 12962 (aquatic systems and recreational fisheries)

Recreational fishing opportunities are limited by the size of the streams in the Easy Fire burned area by legacy water quality and habitat degradation. The proposed action and action alternatives include aquatic conservation actions that would improve the quantity, function, sustainable productivity, and distribution of recreational fisheries as discussed in Chapter 3.

### Executive Order 13112 (invasive species)

This 1999 order requires Federal agency whose actions may affect the status of invasive species to identify those actions and within budgetary limits, "(i) prevent the introduction of invasive species; (ii) detect and respond rapidly to and control populations of such species… (iii) monitor invasive species populations… (iv) provide for restoration of native species and habitat conditions in ecosystems that have been invaded;… (vi) promote public education on invasive species…and (3) not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species…unless, pursuant to guidelines that it has pre-scribed, the agency has determined and made public…that the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions."

### Consumers, Civil Rights, Minorities, and Women:

All Forest Service actions have potential to produce some form of impacts, positive or negative, on the civil rights of individuals or groups, including minorities and women. An analysis of this potential impact is required by Forest Service Manual and Forest Service Handbook direction (see Effect on Consumers, Civil Rights, Minorities, and Women, Chapter 3).

## Project Record

This EIS hereby incorporates by reference the Project Record (40 CFR 1502.21). However, Chapter 3 provides a summary of the specialist's reports in adequate detail to support the rationale for the decisions. The Project Record contains Specialist Reports and other technical documentation used to support the analysis and conclusions in this EIS. These Specialist Reports are for Soil, Water/Fisheries, Wildlife, Forest Vegetation, Fire and Fuels, Rangeland Management & Noxious Weeds, Sensitive Plants, Heritage, Roads and Access, Scenery, Recreation, and Socio-Economics.

Incorporating these Specialist Reports and the Project Record helps implement the CEQ Regulations' provision that agencies should reduce NEPA paperwork (40 CFR 1500.4), that EISs shall be "analytic rather than encyclopedic," and that EISs "shall be kept concise and no longer than absolutely necessary" (40 CFR 1502.2). The objective is to furnish enough site-specific information to demonstrate a reasoned consideration of the environmental impacts of the alternatives and how these impacts can be mitigated, without repeating detailed analysis and background information available elsewhere. The Project Record is available for review at the Prairie City Ranger District, Prairie City, Oregon, Monday through Friday, 8 a.m. to 4 p.m.